CLAIMS:

1. A drive circuit for driving an electrophoretic display having pixels (18), the drive circuit comprising a driver (10,16) for supplying, during an image update period (IUi) wherein the pixels (18) are addressed to refresh an image displayed, a drive waveform (DWi) to an associated one of the pixels (18), the drive waveform (DWi) comprising successively a first pulse (Ri, Si) with a first voltage level (+VM, -VM), and a drive pulse (Di) having a second voltage level (VDi) to obtain a desired intermediate optical state of the associated one of the pixels (18), an absolute value of the second voltage level (VDi) being smaller than an absolute value of the first voltage level (+VM, -VM).

2. A drive circuit as claimed in claim 1, wherein the driver (10, 16) is arranged for supplying during the image update period (IUi) the drive waveform (DWi) wherein the first voltage level (+VM, -VM) is substantially constant over time.

3. A drive circuit as claimed in claim 1, wherein the driver (10, 16) is arranged for supplying during the image update period (IUi) the drive waveform (DWi) wherein the second voltage level (VDi) has a variable level being controlled to obtain the intermediate optical state.

4. A drive circuit as claimed in claim 1, wherein the driver (10, 16) is arranged for supplying during the image update period (IUi) the drive waveform (DWi) wherein the first pulse is a reset pulse (R1) having an energy for changing a present optical state of the associated one of the pixels (18) to one of two extreme optical states.

5. A drive circuit as claimed in claim 1, wherein the driver (10, 16) is arranged for supplying during the image update period (IUi) the drive waveform (DWi) wherein the first pulse is a shaking pulse (Si) comprising at least one sub-pulse having the first voltage level (+VM, -VM), and having the energy for changing the optical state of the associated one of the pixels (18), the energy being too low to change one of two extreme optical states of the associated one of the pixels (18) to the other extreme optical state.

6. A drive circuit as claimed in claim 4, wherein the driver (10, 16) is arranged for supplying during at least one of the image update periods (IUi) the drive waveform (DWi) further comprising a further reset pulse (FR) preceding the first mentioned reset pulse (R1), and having a polarity opposite to a polarity of the first mentioned reset pulse (R1).

7. A drive circuit as claimed in claim 4, wherein the driver (10, 16) is arranged for supplying during at least one of the image update periods (IUi) the drive waveform (DWi) further comprising a shaking pulse (S1) preceding the reset pulse (R1).

8. A drive circuit as claimed in claim 6, wherein the driver (10, 16) is arranged for supplying during at least one of the image update periods (IUi) the drive waveform (DWi) further comprising a shaking pulse (S2) preceding the further reset pulse (FR).

9. A drive circuit as claimed in claim 4, wherein the driver (10, 16) is arranged for supplying during at least one of the image update periods (IUi) the drive waveform (DWi) further comprising a shaking pulse (S3) in-between the reset pulse (R1) and the drive pulse (D1).

10. A drive circuit as claimed in claim 6, wherein the driver (10, 16) is arranged for supplying during at least one of the image update periods (IUi) the drive waveform (DWi) further comprising a shaking pulse (S4) in-between the first mentioned reset pulse (R1) and the drive pulse (D1).

11. A drive circuit as claimed in claim 4 or 6, wherein the driver (10, 16) is arranged for supplying during at least one of the image update periods (IUi) the drive waveform (DWi) wherein the reset pulse (R1) has a duration longer than required to change the optical state of the associated one of the pixels (18) from the present optical state of the pixel (18) to one of the two extreme optical states.

12. An integrated circuit comprising the drive circuit as claimed in claim 1, wherein the integrated circuit comprises a power supply input (PS1) for receiving a power supply voltage (PSV1), the voltage level (+VM, -VM) of the first pulse (Ri, Si) being substantially equal to the power supply voltage (PSV1).

13. An integrated circuit as claimed in claim 12, wherein the second voltage level (VDi) is a variable level, and wherein the integrated circuit comprises the driver (10) for controlling the variable level to obtain the desired intermediate optical state.

14. An integrated circuit as claimed in claim 12, further comprising a further power supply input (PS2) for receiving a further power supply voltage (PSV2), a level of the first mentioned power supply voltage (PSV1) being higher than a level of the further power supply voltage (PSV2), and wherein the integrated circuit comprises the driver (10) for using the first mentioned power supply voltage (PSV1) to generate the first pulse (Ri, Si) and for using the further power supply voltage (PSV2) to generate the drive pulse (Di).

15. An integrated circuit as claimed in claim 12, wherein the power supply input (PS1) is arranged for receiving the power supply voltage (PSV1) being a voltage with the largest absolute value received by the integrated circuit.

16. A display apparatus comprising an electrophoretic display having pixels (18), and a drive circuit as claimed in claim 1.

17. A method of driving an electrophoretic display having pixels (18), the method comprising supplying (10,16), during an image update period (IUi) wherein the pixels (18) are addressed to refresh an image displayed, a drive waveform (DWi) to an associated one of the pixels (18), the drive waveform (DWi) comprising successively a first pulse (Ri, Si) with a first voltage level (+VM, -VM) and a drive pulse (Di) having a second voltage level (VDi) to obtain a desired intermediate optical state of the associated one of the pixels (18), an absolute value of the second voltage level (VDi) being smaller than an absolute value of the first voltage level (+VM, -VM).